

## CLAIMS

1. Floating Solar Chimney (fig 1a, 1b) that is composed by three basic parts

- 5     ○ The main chimney (1.1)  
      ○ The heavy base     (1.2)  
      • The folding part   (1.3)

The main chimney (1.1) is composed by a number of dynamically independent self floating parts. Each part of the main chimney (1.1) is composed by cylindrical  
10   balloon rings (figure 2), with material from strengthened plastic of high strength full from non flammable lighter than air gas (e.g. He, NH<sub>3</sub>). Each part can float, self lifted by the buoyancy of the cylindrical balloon-rings that compose it. The construction of each part is strengthened with intermediate supporting rings from pipes of hard plastic, or composed material or aluminum in an articulated structure (figure 3), so  
15   the floating solar chimney to withstand the compressive forces. The balloon rings (figure 2) with the help of tips that are on the supporting rings (fig 2) are tied up with threads of high strength successively so hat they shape a compact part. Every compact part of the main chimney is composed by a fixed number of balloon and supporting rings and is fastened independently with at least three threads of high  
20   strength and modulus on the heavy base (1.2). Every compact part is separated from the next with a balloon ring full of air that can enter and come out freely in the environment so that it becomes dynamically independent by his neighboring parts. The heavy base of chimney (1.2) is composed by two adjacent equally weighted rings with different exterior diameter in order that the upper to have exterior diameter  
25   bigger than the exterior diameter of chimney seat (1.4) and the lower, diameter smaller than the internal diameter of this seat. The total weight of heavy base (1.2) is bigger than the net lift force of the main chimney. The two rings of the heavy base (1.2) are tied up between them, with a sufficient number of threads having exceptionally high strength and modulus. These threads are surrounded by a flexible  
30   plastic film of high strength that does not permit the air of solar chimney to escape between the two parts of the heavy base. The folding lower part of the floating solar chimneys (1.3) is fastened by the lower ring of the heavy base and is a flexible type accordion. It is composed by balloon rings (fig 2) and supporting rings (fig 3) as the

main chimney. The balloon rings of the folding lower part are not filled with light gas. They have suitable apertures or valves in order that the air of environment can go in and out freely from them. Thus this folding part can be bent and receive the decline that will receive the main chimney and the heavy base, under the influence of exterior winds, ensuring the continuity of the solar chimney (fig 1b).

2. Floating solar chimney according to claim 1 which is characterized by the fact that is manufactured with double walls from light durable material full with non flammable light gas (e.g. He NH<sub>3</sub>, etc.) and which can self lifted and be flexible so that it can stand and face successfully the forces from exterior winds and Bernoulli sub pressure forces from the updraft of warm air that flows through it.